



Dart Aerospace Ltd.  
1270 Aberdeen St  
Hawkesbury, ON  
K6A 1K7  
Canada

Tel (613) 632-5200  
Fax 613 632-5246

**D3537-1****Job Sheet 190343****Part No:** D3537-1**Job Qty:** 20 pcs**Part Name:** Wearpad**Part Weight:** 0 lbs**Status:** New**Priority:** Medium**Job Created:** 2/7/19**Job Tracking No:****Due Date:** 3/6/19**Created By:** Jesse White**Type:** Stock**Description:** SIOP

**Note:** DWG D3537 REV.F IPP Rev:A New Issue 07-02-14 JLM IPP REV:B 15.10.16 added automated welding DD  
verf:JLM IPP REV:C 18.11.09 AS PER DWG REV.F DD VERF:JFS

**Ship Via:****Bill of Materials****Job Routing**

| Op No | Operation                  | Qty    | Start Date | Due Date | Standard  |         | Workcenter/Supplier         |           | Sign-off    |
|-------|----------------------------|--------|------------|----------|-----------|---------|-----------------------------|-----------|-------------|
|       |                            |        |            |          | Setup Hrs | Run Hrs | Workcenter / Supplier       | Lead Time |             |
| 105   | Waterjet - Flow - 1        | 20 pcs |            | 3/6/19   | 0.00      | 0.86    | Waterjet - Flow             |           | OK 19/02/25 |
| 125   | QC 8                       | 20 pcs |            | 3/6/19   | 0.00      | 0.00    | QC 8 - 12                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 14                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 17                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 20                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 25                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 3                    |           |             |
|       |                            |        |            |          |           |         | QC 8 - 32                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 33                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 35                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 39                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 4                    |           |             |
|       |                            |        |            |          |           |         | QC 8 - 44                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 45                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 49                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 58                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 8                    |           |             |
|       |                            |        |            |          |           |         | QC 8 - 9                    |           |             |
|       |                            |        |            |          |           |         | QC 8 - 68                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 67                   |           |             |
|       |                            |        |            |          |           |         | QC 8 - 1 (A)                |           |             |
|       |                            |        |            |          |           |         | QC 8 - 47                   |           |             |
| 140   | Small Fab - Brake NC - B4B | 20 pcs |            | 3/6/19   | 0.03      | 0.26    | Small Fab - Brake - 1 - B4B |           |             |
|       |                            |        |            |          |           |         | Small Fab - Brake - 2 - B4B |           |             |
|       |                            |        |            |          |           |         | Small Fab - Brake - 3 - B4B |           |             |
| 150   | QC 5                       | 20 pcs |            | 3/6/19   | 0.00      | 0.00    | QC 5 - 10                   |           |             |
|       |                            |        |            |          |           |         | QC 5 - 12                   |           |             |
|       |                            |        |            |          |           |         | QC 5 - 17                   |           |             |
|       |                            |        |            |          |           |         | QC 5 - 18                   |           |             |
|       |                            |        |            |          |           |         | QC 5 - 19                   |           |             |

DAS  
40  
9-89

DAS  
30  
3-89

Plex 2/7/19 11:17 AM dart.white.jesse

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|------------------------|--|
| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><div style="display: flex; justify-content: space-between;"> <div>           Skid-tube <input type="checkbox"/><br/>           Machining <input type="checkbox"/><br/>           Large Fab <input type="checkbox"/> </div> <div>           Cross tube <input type="checkbox"/><br/>           Small Fab <input type="checkbox"/><br/>           Finishing <input type="checkbox"/> </div> <div>           Eng. (Non-AW) <input type="checkbox"/><br/>           Prod. Eng. Coord. <input type="checkbox"/><br/>           Rec/Store/Packaging <input type="checkbox"/> </div> <div>           Engineering <input type="checkbox"/><br/>           Water Jet <input type="checkbox"/><br/>           Supplier <input type="checkbox"/><br/>           Quality <input type="checkbox"/> </div> </div>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                        |  |
| Date :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Sequence #:                                                                                                                       | QTY Affected :                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |  | MRB (QSI042)           |  |
| Description Work Order Deviation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |                                                                                                                                   | Disposition                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |  | Completed By           |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | Lead hand / Supervisor |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  | QC / QA Coordinator    |  |
| <b>Root Cause</b><br><br><div style="display: flex; flex-direction: column; align-items: flex-start;"> <div>Operator <input type="checkbox"/></div> <div>Manufacturing Process <input type="checkbox"/></div> <div>Equip/Tooling <input type="checkbox"/></div> <div>Handling/Presservation <input type="checkbox"/></div> <div>Material <input type="checkbox"/></div> <div>Product Improvement <input type="checkbox"/></div> <div>Process Improvement <input type="checkbox"/></div> <div>Human Factors <input type="checkbox"/></div> </div> |                                                                                                                                   | <b>FAULT CATEGORY</b><br><br><div style="display: flex; flex-wrap: wrap;"> <div style="width: 50%;"> <input type="checkbox"/> Pressure/Forced<br/> <input type="checkbox"/> Bending<br/> <input type="checkbox"/> Crushing<br/> <input type="checkbox"/> Cracks<br/> <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist<br/> <input type="checkbox"/> Marks/Chatter<br/> <input type="checkbox"/> Mislabeled         </div> <div style="width: 50%;"> <input type="checkbox"/> Contamination<br/> <input type="checkbox"/> Misaligned/off center<br/> <input type="checkbox"/> BOM/Route<br/> <input type="checkbox"/> Broken/Damage/Defect<br/> <input type="checkbox"/> Incomplete/Unclear Instructions<br/> <input type="checkbox"/> Drill Holes<br/> <input type="checkbox"/> Fit/Function         </div> <div style="width: 50%;"> <input type="checkbox"/> Power Loss/Surge<br/> <input type="checkbox"/> Folio/Program<br/> <input type="checkbox"/> Grain Direction<br/> <input type="checkbox"/> Weld<br/> <input type="checkbox"/> Wrong Stock Pulled<br/> <input type="checkbox"/> Out of Sequence<br/> <input type="checkbox"/> Off-set/Set-up         </div> <div style="width: 50%;"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </div> </div> |  |                        |  |
| Other/Details:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |  |                        |  |



|     |                                |           |        |           |                                |                    |
|-----|--------------------------------|-----------|--------|-----------|--------------------------------|--------------------|
|     |                                |           |        |           | QC 5 - 22                      |                    |
|     |                                |           |        |           | QC 5 - 24                      |                    |
|     |                                |           |        |           | QC 5 - 3                       |                    |
|     |                                |           |        |           | QC 5 - 42                      |                    |
|     |                                |           |        |           | QC 5 - 43                      |                    |
|     |                                |           |        |           | QC 5 - 49                      |                    |
|     |                                |           |        |           | QC 5 - 51                      |                    |
|     |                                |           |        |           | QC 5 - 58                      |                    |
|     |                                |           |        |           | QC 5 - 68                      |                    |
|     |                                |           |        |           | QC 5 - 9                       |                    |
|     |                                |           |        |           | QC 5 - 50                      |                    |
|     |                                |           |        |           | QC 5 - 30                      |                    |
| 160 | Automated Welding - B4B        | 20<br>pcs | 3/6/19 | 0.00 1.48 | Automated Welding - 1 -<br>B4B | <i>MF</i>          |
| 170 | QC 10                          | 20<br>pcs | 3/6/19 | 0.00 0.00 | QC 10 - 10                     |                    |
|     |                                |           |        |           | QC 10 - 18                     |                    |
|     |                                |           |        |           | QC 10 - 24                     |                    |
|     |                                |           |        |           | QC 10 - 43                     |                    |
|     |                                |           |        |           | QC 10 - 50                     | <i>A</i>           |
|     |                                |           |        |           | QC 10 - 58                     |                    |
|     |                                |           |        |           | QC 10 - 9                      |                    |
| 180 | QC 5                           | 20<br>pcs | 3/6/19 | 0.00 0.00 | QC 5 - 10                      |                    |
|     |                                |           |        |           | QC 5 - 12                      |                    |
|     |                                |           |        |           | QC 5 - 17                      |                    |
|     |                                |           |        |           | QC 5 - 18                      |                    |
|     |                                |           |        |           | QC 5 - 19                      |                    |
|     |                                |           |        |           | QC 5 - 22                      |                    |
|     |                                |           |        |           | QC 5 - 24                      |                    |
|     |                                |           |        |           | QC 5 - 3                       |                    |
|     |                                |           |        |           | QC 5 - 42                      |                    |
|     |                                |           |        |           | QC 5 - 43                      |                    |
|     |                                |           |        |           | QC 5 - 49                      |                    |
|     |                                |           |        |           | QC 5 - 51                      |                    |
|     |                                |           |        |           | QC 5 - 58                      |                    |
|     |                                |           |        |           | QC 5 - 68                      |                    |
|     |                                |           |        |           | QC 5 - 9                       |                    |
|     |                                |           |        |           | QC 5 - 50                      | <i>A</i>           |
|     |                                |           |        |           | QC 5 - 30                      |                    |
| 210 | Packaging 3-1 - Stock -<br>B4B | 20<br>pcs | 3/6/19 | 0.00 0.00 | Packaging 3 - 1 - B4B          | <i>FP-001</i>      |
|     |                                |           |        |           | Packaging 3 - 2 - B4B          | <i>all 14-3-27</i> |
|     |                                |           |        |           | Packaging 3 - 3 - B4B          |                    |
|     |                                |           |        |           | Packaging 3 - 4 - B4B          |                    |
|     |                                |           |        |           | Packaging 3 - 5 - B4B          |                    |
|     |                                |           |        |           | Packaging 3 - 6 - B4B          |                    |
|     |                                |           |        |           | Packaging 3 - 7 - B4B          |                    |
|     |                                |           |        |           | Packaging 3 - 8 - B4B          |                    |
|     |                                |           |        |           | Packaging 3 - 9 - B4B          |                    |
|     |                                |           |        |           | Packaging 3 - 10 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 11 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 12 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 13 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 14 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 15 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 16 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 17 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 18 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 19 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 20 - B4B         |                    |
|     |                                |           |        |           | Packaging 3 - 21 - B4B         |                    |

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

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| <b>Job:</b> _____<br><b>Part No.</b> _____                                                                                                                                                                                                                                                                                                                                           |                                                          | <b>DISPOSITION</b><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                                            | <b>DEPARTMENT/PROCESS</b><br>Skid-tube <input type="checkbox"/><br>Machining <input type="checkbox"/><br>Large Fab <input type="checkbox"/><br>Cross tube <input type="checkbox"/><br>Small Fab <input type="checkbox"/><br>Finishing <input type="checkbox"/><br>Eng. (Non-AW) <input type="checkbox"/><br>Prod. Eng. Coord. <input type="checkbox"/><br>Rec/Store/Packaging <input type="checkbox"/><br>Engineering <input type="checkbox"/><br>Water Jet <input type="checkbox"/><br>Supplier <input type="checkbox"/><br>Quality <input type="checkbox"/> |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <b>Date :</b> _____                                                                                                                                                                                                                                                                                                                                                                  |                                                          | <b>Sequence #:</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |                                            | <b>QTY Affected :</b> _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |  | <b>MRB (QSI042)</b> |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <b>Description Work Order Deviation</b>                                                                                                                                                                                                                                                                                                                                              |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                            | <b>Disposition</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                            | <b>Completed By</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                            | <b>Lead hand / Supervisor</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                            | <b>QC / QA Coordinator</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <b>Root Cause</b><br>Operator <input type="checkbox"/><br>Manufacturing Process <input type="checkbox"/><br>Equip/Tooling <input type="checkbox"/><br>Handling/Presservation <input type="checkbox"/><br>Material <input type="checkbox"/><br>Product Improvement <input type="checkbox"/><br>Process Improvement <input type="checkbox"/><br>Human Factors <input type="checkbox"/> |                                                          | <b>FAULT CATEGORY</b><br><table border="0"><tr><td><input type="checkbox"/> Pressure/Forced</td><td><input type="checkbox"/> Contamination</td><td><input type="checkbox"/> Power Loss/Surge</td><td><input type="checkbox"/> Positioned Wrong</td></tr><tr><td><input type="checkbox"/> Bending</td><td><input type="checkbox"/> Misaligned/off center</td><td><input type="checkbox"/> Folio/Program</td><td><input type="checkbox"/> Outside Tolerance</td></tr><tr><td><input type="checkbox"/> Crushing</td><td><input type="checkbox"/> BOM/Route</td><td><input type="checkbox"/> Grain Direction</td><td><input type="checkbox"/> Drawing</td></tr><tr><td><input type="checkbox"/> Cracks</td><td><input type="checkbox"/> Broken/Damage/Defect</td><td><input type="checkbox"/> Weld</td><td><input type="checkbox"/> Finish</td></tr><tr><td><input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist</td><td><input type="checkbox"/> Incomplete/Unclear Instructions</td><td><input type="checkbox"/> Wrong Stock Pulled</td><td><input type="checkbox"/> Part Lost/Missing</td></tr><tr><td><input type="checkbox"/> Marks/Chatter</td><td><input type="checkbox"/> Drill Holes</td><td><input type="checkbox"/> Out of Sequence</td><td><input type="checkbox"/> Misread</td></tr><tr><td><input type="checkbox"/> Mislabeled</td><td><input type="checkbox"/> Fit/Function</td><td><input type="checkbox"/> Off-set/Set-up</td><td></td></tr></table> |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  | <input type="checkbox"/> Pressure/Forced | <input type="checkbox"/> Contamination | <input type="checkbox"/> Power Loss/Surge | <input type="checkbox"/> Positioned Wrong | <input type="checkbox"/> Bending | <input type="checkbox"/> Misaligned/off center | <input type="checkbox"/> Folio/Program | <input type="checkbox"/> Outside Tolerance | <input type="checkbox"/> Crushing | <input type="checkbox"/> BOM/Route | <input type="checkbox"/> Grain Direction | <input type="checkbox"/> Drawing | <input type="checkbox"/> Cracks | <input type="checkbox"/> Broken/Damage/Defect | <input type="checkbox"/> Weld | <input type="checkbox"/> Finish | <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist | <input type="checkbox"/> Incomplete/Unclear Instructions | <input type="checkbox"/> Wrong Stock Pulled | <input type="checkbox"/> Part Lost/Missing | <input type="checkbox"/> Marks/Chatter | <input type="checkbox"/> Drill Holes | <input type="checkbox"/> Out of Sequence | <input type="checkbox"/> Misread | <input type="checkbox"/> Mislabeled | <input type="checkbox"/> Fit/Function | <input type="checkbox"/> Off-set/Set-up |  |
| <input type="checkbox"/> Pressure/Forced                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Contamination                   | <input type="checkbox"/> Power Loss/Surge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | <input type="checkbox"/> Positioned Wrong  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Bending                                                                                                                                                                                                                                                                                                                                                     | <input type="checkbox"/> Misaligned/off center           | <input type="checkbox"/> Folio/Program                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | <input type="checkbox"/> Outside Tolerance |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Crushing                                                                                                                                                                                                                                                                                                                                                    | <input type="checkbox"/> BOM/Route                       | <input type="checkbox"/> Grain Direction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/> Drawing           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Cracks                                                                                                                                                                                                                                                                                                                                                      | <input type="checkbox"/> Broken/Damage/Defect            | <input type="checkbox"/> Weld                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <input type="checkbox"/> Finish            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Crimp/Kink/Ripple/Wave/Twist                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/> Incomplete/Unclear Instructions | <input type="checkbox"/> Wrong Stock Pulled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Part Lost/Missing |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Marks/Chatter                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/> Drill Holes                     | <input type="checkbox"/> Out of Sequence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | <input type="checkbox"/> Misread           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
| <input type="checkbox"/> Mislabeled                                                                                                                                                                                                                                                                                                                                                  | <input type="checkbox"/> Fit/Function                    | <input type="checkbox"/> Off-set/Set-up                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |
|                                                                                                                                                                                                                                                                                                                                                                                      |                                                          | <b>Other/Details:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                                            |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |                     |  |                                          |                                        |                                           |                                           |                                  |                                                |                                        |                                            |                                   |                                    |                                          |                                  |                                 |                                               |                               |                                 |                                                       |                                                          |                                             |                                            |                                        |                                      |                                          |                                  |                                     |                                       |                                         |  |



|     |            |           |        |           |                        |  |
|-----|------------|-----------|--------|-----------|------------------------|--|
|     |            |           |        |           | Packaging 3 - 22 - B4B |  |
|     |            |           |        |           | Packaging 3 - 23 - B4B |  |
|     |            |           |        |           | Packaging 3 - 24 - B4B |  |
|     |            |           |        |           | Packaging 3 - 25 - B4B |  |
|     |            |           |        |           | Packaging 3 - 26 - B4B |  |
|     |            |           |        |           | Packaging 3 - 27 - B4B |  |
|     |            |           |        |           | Packaging 3 - 28 - B4B |  |
|     |            |           |        |           | Packaging 3 - 29 - B4B |  |
|     |            |           |        |           | Packaging 3 - 30 - B4B |  |
|     |            |           |        |           | Packaging 3 - 31 - B4B |  |
|     |            |           |        |           | Packaging 3 - 32 - B4B |  |
|     |            |           |        |           | Packaging 3 - 33 - B4B |  |
|     |            |           |        |           | Packaging 3 - 34 - B4B |  |
|     |            |           |        |           | Packaging 3 - 35 - B4B |  |
| 220 | QC 21 - SA | 20<br>pcs | 3/6/19 | 0.00 0.00 | QC 21 - SA - 21        |  |
|     |            |           |        |           | QC 21 - SA - 70        |  |
|     |            |           |        |           | QC 21 - SA - 53        |  |

MAR 25 2019

Part Op **105** - 1-Cut D3537-1 as per Dwg D3537 Dwg Rev: F Prog Rev: F 2-Debur if necessary  
 Descriptions: **125** - (QC8- Inspect parts - second check)  
**140** - (Form as per dwg)  
**150** - (QC5- Inspect part completeness to step on W/O)  
**160** - (Automated welding) \*\*\*SEE NOTE 8 FOR SURFACE BUILDUP\*\*\* 1- WELD AS PER DWG AND QSI004 4.5 FOR AUTOMATED WELDING USE 8259 HARDCOAT BATCH: \_\_\_\_\_  
**170** - (QC10- Inspect visual per QSI004- ground welds)  
**180** - (QC5- Inspect part completeness to step on W/O)  
**210** - (Identify as per dwg & Stock Location: \_\_\_\_\_)  
**220** - (QC21- Final Inspection - Work Order Release)

### Job BOM

| Part / Item | Component Name     | Quantity            | Operation               | Container |
|-------------|--------------------|---------------------|-------------------------|-----------|
| M304S16GA   | 304/316 Sheet .063 | 2.1200 sf (.106 ea) | 105-Waterjet - Flow - 1 |           |

### Job Allocations

| Operation               | Component Part | Required | Inventory | Allocated |
|-------------------------|----------------|----------|-----------|-----------|
| 105-Waterjet - Flow - 1 | M304S16GA      | 2        | 16        | 0         |

### Part Specifications

| Spec No | Description | Target/Tolerance    | Limits         | Type | Special Comments |
|---------|-------------|---------------------|----------------|------|------------------|
| 1       | Wearpad     | 4.250inches ± 0.010 | 4.260<br>4.240 |      |                  |
| 2       | Wearpad     | 3.500inches ± 0.010 | 3.510<br>3.490 |      |                  |
| 3       | Wearpad     | 1.970inches ± 0.030 | 2.000<br>1.940 |      |                  |
| 4       | Wearpad     | 3.630inches ± 0.030 | 3.660<br>3.600 |      |                  |
| 5       | Wearpad     | 2.420inches ± 0.010 | 2.430<br>2.410 |      |                  |
| 6       | Wearpad     | 0.220inches ± 0.010 | 0.230<br>0.210 |      |                  |
| 7       | Wearpad     | 0.375inches ± 0.010 | 0.385<br>0.365 |      |                  |
| 8       | Wearpad     | 0.063inches ± 0.010 | 0.073<br>0.053 |      |                  |

Plex 2/7/19 11:17 AM dart.white.jesse

Entered: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

NCR No. \_\_\_\_\_

Route update only ☐

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
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| Job: _____<br><br>Part No. _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <b>DISPOSITION</b><br><br>Rework <input type="checkbox"/><br>Scrap <input type="checkbox"/><br>Use-as-is <input type="checkbox"/> | <b>DEPARTMENT/PROCESS</b><br><br><table style="width:100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Cross tube <input type="checkbox"/></td> <td>Eng. (Non-AW) <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Supplier Quality <input type="checkbox"/></td> </tr> </table> |                                                                                                                                                                                                                                                  |                              |                          | Skid-tube <input type="checkbox"/> | Cross tube <input type="checkbox"/> | Eng. (Non-AW) <input type="checkbox"/> | Engineering <input type="checkbox"/> | Machining <input type="checkbox"/> | Small Fab <input type="checkbox"/> | Prod. Eng. Coord. <input type="checkbox"/> | Water Jet <input type="checkbox"/> | Large Fab <input type="checkbox"/> | Finishing <input type="checkbox"/> | Rec/Store/Packaging <input type="checkbox"/> | Supplier Quality <input type="checkbox"/> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Skid-tube <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Cross tube <input type="checkbox"/>                                                                                               | Eng. (Non-AW) <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Engineering <input type="checkbox"/>                                                                                                                                                                                                             |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Machining <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Small Fab <input type="checkbox"/>                                                                                                | Prod. Eng. Coord. <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | Water Jet <input type="checkbox"/>                                                                                                                                                                                                               |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Large Fab <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Finishing <input type="checkbox"/>                                                                                                | Rec/Store/Packaging <input type="checkbox"/>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Supplier Quality <input type="checkbox"/>                                                                                                                                                                                                        |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Date : _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |                                                                                                                                   | CITY Affected: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                  | MRB (QSI042) _____           |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Description<br><br><div style="position: absolute; top: 400px; left: 230px; font-size: 8px;">           Dart Aerospace Ltd.<br/>           1270 Aberdeen Street<br/>           Newmarket, ON N6A 1K7<br/>           CANADA<br/>           TEL: 1 613 632-6200<br/>           Email: sales@dartaero.com<br/>           www.dartaerospace.com         </div> <div style="position: absolute; top: 580px; left: 240px; font-size: 24px; font-weight: bold;">DART</div> <div style="position: absolute; top: 590px; left: 270px; font-size: 8px;">AEROSPACE</div> <div style="position: absolute; top: 540px; left: 280px; font-size: 10px;">           Container No: S156312<br/> <br/>           Part: D3537-1<br/>           Job No: 190343<br/>           Serial No/Batch: S156312<br/>           Revision: F<br/>           Inspector: _____<br/>           Exp Date: _____<br/>           Instructions: Various STC's         </div> <div style="position: absolute; top: 430px; left: 390px; font-size: 8px;">Date: 02/25/19</div> |                                                                                                                                   | Disposition<br><br>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |                                                                                                                                                                                                                                                  | Completed By _____           |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  | Lead hand / Supervisor _____ |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  | QC / QA Coordinator _____    |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |                                                                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| <b>Root Cause</b><br><br><table style="width:100%;"> <tr><td>Operator</td><td><input type="checkbox"/></td></tr> <tr><td>Manufacturing Process</td><td><input type="checkbox"/></td></tr> <tr><td>Equip/Tooling</td><td><input type="checkbox"/></td></tr> <tr><td>Handling/Presservation</td><td><input type="checkbox"/></td></tr> <tr><td>Material</td><td><input type="checkbox"/></td></tr> <tr><td>Product Improvement</td><td><input type="checkbox"/></td></tr> <tr><td>Process Improvement</td><td><input type="checkbox"/></td></tr> <tr><td>Human Factors</td><td><input type="checkbox"/></td></tr> </table>                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                                                                   | Operator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | <input type="checkbox"/>                                                                                                                                                                                                                         | Manufacturing Process        | <input type="checkbox"/> | Equip/Tooling                      | <input type="checkbox"/>            | Handling/Presservation                 | <input type="checkbox"/>             | Material                           | <input type="checkbox"/>           | Product Improvement                        | <input type="checkbox"/>           | Process Improvement                | <input type="checkbox"/>           | Human Factors                                | <input type="checkbox"/>                  | <b>FAULT CATEGORY</b><br><br><table style="width:100%;"> <tr> <td>Cracks</td> <td>Broken/Damage/Defect</td> <td>Grain Direction</td> <td rowspan="4"> <input type="checkbox"/> Positioned Wrong<br/> <input type="checkbox"/> Outside Tolerance<br/> <input type="checkbox"/> Drawing<br/> <input type="checkbox"/> Finish<br/> <input type="checkbox"/> Part Lost/Missing<br/> <input type="checkbox"/> Misread         </td> </tr> <tr> <td>Crimp/Kink/Ripple/Wave/Twist</td> <td>Incomplete/Unclear Instructions</td> <td>Weld</td> </tr> <tr> <td>Marks/Chatter</td> <td>Drill Holes</td> <td>Wrong Stock Pulled</td> </tr> <tr> <td>Mislabeled</td> <td>Fit/Function</td> <td>Out of Sequence</td> </tr> <tr> <td colspan="2">Other/Details: _____</td> <td>Off-set/Set-up</td> <td></td> </tr> </table> |  |  | Cracks | Broken/Damage/Defect | Grain Direction | <input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Outside Tolerance<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Misread | Crimp/Kink/Ripple/Wave/Twist | Incomplete/Unclear Instructions | Weld | Marks/Chatter | Drill Holes | Wrong Stock Pulled | Mislabeled | Fit/Function | Out of Sequence | Other/Details: _____ |  | Off-set/Set-up |  |
| Operator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Manufacturing Process                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Equip/Tooling                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Handling/Presservation                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Material                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Product Improvement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Process Improvement                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Human Factors                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | <input type="checkbox"/>                                                                                                          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Cracks                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Broken/Damage/Defect                                                                                                              | Grain Direction                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | <input type="checkbox"/> Positioned Wrong<br><input type="checkbox"/> Outside Tolerance<br><input type="checkbox"/> Drawing<br><input type="checkbox"/> Finish<br><input type="checkbox"/> Part Lost/Missing<br><input type="checkbox"/> Misread |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Crimp/Kink/Ripple/Wave/Twist                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Incomplete/Unclear Instructions                                                                                                   | Weld                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Marks/Chatter                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | Drill Holes                                                                                                                       | Wrong Stock Pulled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Mislabeled                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            | Fit/Function                                                                                                                      | Out of Sequence                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |
| Other/Details: _____                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                                                                                                                                   | Off-set/Set-up                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                                                                                                                                                                                  |                              |                          |                                    |                                     |                                        |                                      |                                    |                                    |                                            |                                    |                                    |                                    |                                              |                                           |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |  |  |        |                      |                 |                                                                                                                                                                                                                                                  |                              |                                 |      |               |             |                    |            |              |                 |                      |  |                |  |